WHAT IS CLAIMED IS:

1. A lamp device for a vehicle comprising:

a light source;

a reflector in which a reflection surface is a free curved surface;

a lens having no prism; and

a reflected light by said reflector transmitting through said lens so as to be irradiated to an external section in accordance with a target light distribution pattern,

wherein said lens is formed in a convex shape in a vertical cross section and a horizontal cross section.

2. The lamp device for a vehicle according to claim 1, wherein the reflection surface of said reflector is structured such that the vertical cross section and the horizontal cross section are formed in a substantially hyperboloidal surface smaller than said lens.

3. The lamp device for a vehicle according to claim 1, wherein a free curved surface formed on the reflection surface of said reflector is a non-uniform rational B-spline surface (NURBS).

4. The lamp device for a vehicle according to claim 2, wherein a free curved surface formed on the reflection surface of said reflector is a non-uniform rational B-spline surface (NURBS).

5. The lamp device for a vehicle according to claim 1, wherein a torus curved surface or a free curved surface is formed on a front surface or/and a back surface of said lens.

6. The lamp device for a vehicle according to claim 2, wherein a torus curved surface or a free curved surface is formed on a front surface or/and a back surface of said lens.

7. The lamp device for a vehicle according to claim 3, wherein a torus curved surface or a free curved surface is formed on a front surface or/and a back surface of said lens.

8. The lamp device for a vehicle according to claim 4, wherein a torus curved surface or a free curved surface is formed on a front surface or/and a back surface of said lens.